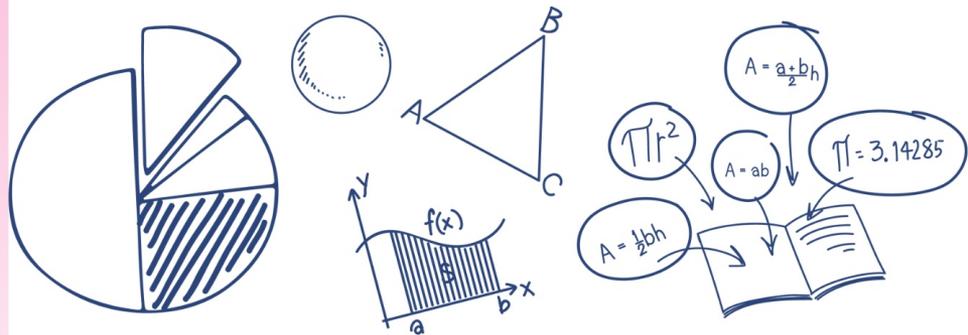




# Ration and proportion

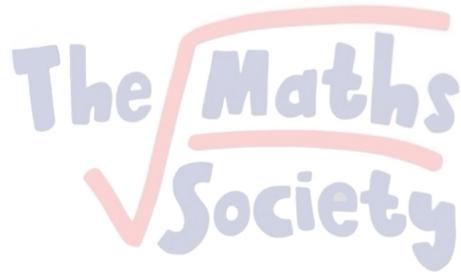


MATHEMATICS

1. Express 42 minutes as a percentage of 5 hours.

$$5\text{hr} \times 60 = 300 \text{ mins}$$

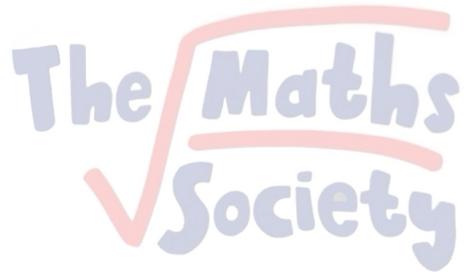
$$\frac{42}{300} \times 100 = 14\%$$



2. Express 450 millimetres as a fraction of 3 litres.  
Give your answer in its simplest form.

$$3 \text{ litres} = 3000 \text{ mL}$$

$$\frac{450}{3000} = \frac{3}{20}$$



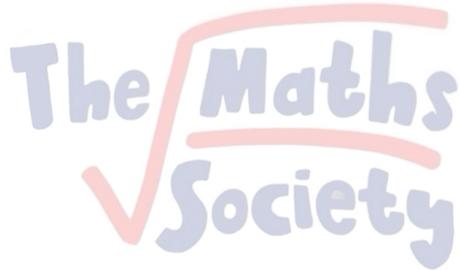
3. Bronze is made from copper and tin in the ratio of 22: 3 by weight.  
Calculate the weight of copper, in kg, needed to make 12.5 kg of bronze.

$$\begin{array}{l} C \quad : \quad T \\ 22 \quad : \quad 3 \end{array}$$

$$25 = 12.5 \text{ kg}$$

$$1 = 0.5$$

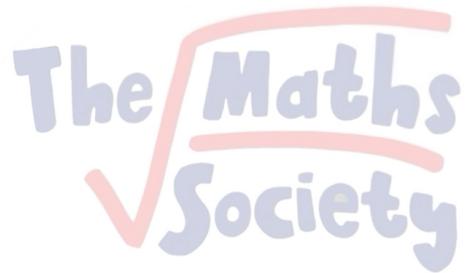
$$\begin{aligned} \text{weight (copper)} &= 22 \times 0.5 \\ &= 11 \text{ kg} \end{aligned}$$



4. Write 48 seconds as a fraction of 1 day.  
Give your answer in its simplest form.

$$24 \text{ hrs} \times 3600 = 86400\text{s}$$

$$\frac{48}{86400} = \frac{1}{1800}$$



5. Express  $7\frac{1}{2}$  minutes as a fraction of 24 hours.  
Give your answer in its simplest form.

$$7 \text{ mins } 30 \text{ s} = 450 \text{ s}$$

$$24 \text{ hrs} \times 3600 = 86400 \text{ s}$$

$$\frac{450}{86400} = \frac{1}{192}$$

